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| **Name of Lesson:** The Water Cycle 4th grade  By: Jessica Harris | **Materials: Books:**  The Life and Times of a Drop of Water: The Water Cycle by Angela Royston  <http://www.uread.com/book/life-times-drop-water-angela/9781410919250>  Weather by Harcourt School Publishers  <http://www.uread.com/book/harcourt-school-publishers-science-georgia/9780153666773>  Re-Cycles by Michael Elsohn Ross  <http://www.uread.com/book/recycles-moore-michael-elsohn-ross/9780761319498>  Solids, Liquids and Gases by Carol Ballard  <http://www.amazon.com/Solids-Liquids-Gases-Bubbles-Science/dp/1403409552/ref=sr_1_1?s=books&ie=UTF8&qid=1322014434&sr=1-1>  A Drop of Water by Walter Wick  <http://www.uread.com/book/drop-water-walter-wick/9780590221979>  **Technology:** [**http://www.brainpopjr.com/science/weather/watercycle/preview.weml**](http://www.brainpopjr.com/science/weather/watercycle/preview.weml) |
| **Standard(s):**  **S4E3.** Students will differentiate between the states of water and how they relate to the water cycle and weather  **ELA4R1** The student demonstrates comprehension and shows evidence of a warranted and responsible explanation of a variety of literary and informational texts.  **Element(s):**  **S4E3** d. Explain the water cycle (evaporation, condensation, and precipitation).  **ELA4R1** a. Locates facts that answer the reader’s questions.  c. Identifies and uses knowledge of common graphic features (e.g., charts, maps, diagrams, illustration). | |
| **Identify Desired Results** | |
| **Enduring Understanding(s):** | **Essential Question(s):** |
| **Science:**  Water is conserved on earth in the forms of water ice and water vapor.    **Reading:**  Reading for information develops understanding of a subject. | What is the water cycle?  What drives the movement of water on Earth? |
| **What will students understand as a result of this plan?** | **What questions will focus this plan?** |
| *The students will understand that the water cycle is the cause of the different weather conditions. The will understand that water moves in a cycle all over earth.* | How does water move from the ocean or lakes to the clouds? What causes the water to evaporate? What does the water turn into while it evaporates. How do we influence the water cycle? |
| **Determine Acceptable Evidence (Assessment)** | |
| **What evidence will show that students understand . . .** | |
| **Performance Task(s):**  **Instructional Plan:**   We will begin each lesson by adding any new questions the students may have to our KWL chart.   Then we will begin our center rotation. Each group will have a folder that is the color of their group. The worksheets and instruction sheets will also be the color of their group.   |  |  |  |  | | --- | --- | --- | --- | | Centers | Day 2 | Day 3 | Day4 | | Inquiry | Blue | Purple | Orange | | Technology | Orange | Blue | Purple | | Project | Purple | Orange | Blue |   **Inquiry center- Blue group**   The goal of this center is to help the students see the cause and effect of the water-cycle. We will begin by re-reading the passage in  Re-Cycles  and modeling inquiry strategies as we read. We will stop at spots marked in the book (every few pages) and try to predict what will happen next. The teacher will encourage the students to ask questions about the water cycle process. Each color group will complete a different experiment and report back to the class at the end of each days lesson or at the beginning of the next days lesson.   They will follow the directions (attached- Modeling Instructions) and construct the model of the water cycle. Each student will have a job within the group to ensure participation opportunities.   Students will make observations and predictions on their worksheets (attached- Modeling Worksheet), as well as write down any questions that may arise.  **Technology center- Orange group**   The students will choose the activity they would like to complete. All activities have instructions that should be read before beginning the assignment. some assignments require smaller groups within the color groups.     Reader's Theater- This group requires participation from 3 or 4 students. They will be provided a script to follow and they will record themselves performing the play.   script:  <http://www.enchantedlearning.com/rt/weather/watercycle.shtml>   Music Video: The student(s) will watch an example of a music video about the water cycle ( <http://www.teachertube.com/viewVideo.php?title=Water_Cycle_Song&video_id=70796> ) They will read the sample lyrics (attached- Lyrics) and either write their own song or add to the lyrics provided.   Interview: It is preferred that 2 students work on this option. The student will answer interview questions (attached- Interview) as if they were a certain part of the water cycle (cloud, rain drop, sun, water vapor). This will be video taped. Their answers must be exciting and descriptive to show a proper understanding of the water cycle.  **Project-based center- Purple group**   Each student will read the designated pages in the book(s) assigned to their group. Next, they will answer the reading response questions on their worksheet (attached- Vocab Worksheets). They will then complete the RAFT persuasive writing activity and make a picture model of the water cycle to go along with their writing assignment.   Short Story (writing)- The student must write a short story that includes all 5 vocabulary words. The words must be used correctly and the story must contain at least one character, sequencing and a clear plot.   Weather Report (listening/speaking)- The student must write a weather report that includes all five vocabulary words. The words must be used correctly. The student will make a voice recording of their weather report.   Poster (visual/artistic)- The student must create a model of the water cycle on a large sheet of paper. It must include all five vocabulary words, used correctly.  **Wrap-up:**   At the end of each lesson we will share what went on in the inquiry center and add what we have learned or what questions may have come up to our KWL chart. | |
| **Other Evidence:**  Students’ assignments will be checked for completion. Any student needing additional clarification will get extra help. All students will be graded based on the final test. They should have at least one assignment to turn in for each center.  **Informal Assessments:**  The KWL chart will serve as a guide to see which students need more help and which students can be the ones helping others. Doing this at the beginning and end of each day should allow me to see which students are progressing and which students are struggling. | |
| Plan Learning Experience and Instruction | |
| **Given the targeted understandings, other lesson/unit goals, and the assessment evidence identified, what knowledge and skills are needed?** | |
| **Students will need to know . . .** | **Students will need to be able to . . .** |
| * Key Words: * Evaporation * Condensation * Precipitation * Water vapor * Ground water * How to read an informational text and communicate the information in different ways. | * Define all key words. * Draw and explain a model of the water cycle. * Relate the 3 main parts of the water cycle to everyday life (steam, condensation, etc.) as well as how it relates to weather. * Use graphs, pictures and diagrams to find information. |

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| **What teachings and learning experiences will equip students to demonstrate the targeted understandings?** | |
| **Hook:** KWL chart, Brain Pop Video | Prior Knowledge: We will discuss prior knowledge during the KWL portion and have a class discussion to spark more ideas and activate schema.  General understanding of weather is required. |

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| **Type of instruction:**  **Direct instruction is minimal in this lesson. I want the students to be able to discuss the information as a class and find the answers for themselves individually or as a group.**  **Cooperative learning: The students will be working in groups to help each other understand the lesson. Teacher guidance will be available to make sure students are on track.**  **Problem-based: The students will conduct/observe the experiment and then they will be responsible for using the books to relate it back to the larger idea of the water cycle.** | **Direct: The initial class discussion will be guided and that is about the most direct instruction involved.**  **Cooperative: Each group will be given books on their reading level to find answers and complete the activities together.**  **PB: The students will conduct/observe the experiment and then they will be responsible for using the books to relate it back to the larger idea of the water cycle.** |
| **Differentiation:**   The books assigned to each group are leveled; however, the students may read the other books in the text set to complete the activity once they have read the book assigned to their group. Each inquiry center experiment is based on the general behavior expectations of that group as well as their ability to report the information back to the class. | **Conclude**  At the end of each lesson we will share what went on in the inquiry center and add what we have learned or what questions may have come up to our KWL chart.  Also, before taking the final test, the students will watch the videos that their classmates made during the lessons. |

Adapted/formatted from *Understanding by Design* by Grant Wiggins and Jay McTighe